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10/786,512	02/24/2004	Yukihisa Nakajo	393032043800	2773

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EXAMINER
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ALUNKAL, THOMAS D

ART UNIT	PAPER NUMBER
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2627

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

Application No.

10/786,512

Applicant(s)

NAKAJO, YUKIHISA

Examiner

Thomas D. Alunkal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-48 is/are pending in the application.
- 4a) Of the above claim(s) 1-7 and 15-48 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 8-14 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d).

### *Election/Restrictions*

Claims 1-7 and 15-48 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 4/9/07.

Claims 8-14 remain pending.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 9 and 10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 9 and 10, both claims, dependent from claim 8, recite the limitation, "...wherein the step of **providing** provides both versions...". Claim 8 recites two separate "providing" steps. Therefore, it is unclear which "providing" step claims 9 and 10 are referring to.

Proper correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 8-11 and 13-14 is rejected under 35 U.S.C. 102(b) as being anticipated by Taniguchi (US 5,625,614).

Regarding claim 8, Taniguchi discloses an optical disc recording method (see Title) of recording information at a given recording rate by irradiating a laser beam modulated by a laser drive signal onto a surface of an optical disk moving at a given linear velocity relative to the laser beam, the information being recorded in the form of an alternate arrangement of pits and lands according to a mark length recording scheme (Figure 1, *information recording apparatus*, and Column 4, lines 48-64), the method comprising the steps of: providing a plurality of strategies which are selectable according to a model of the optical disk (Column 7, lines 41-48, *i.e.*, a *write-once-read-many type disc*), the recording rate and the linear velocity for adjusting a pulse width of the laser drive signal and a power of the laser beam to form a pit (Column 1, lines 46-65, *i.e.*, *first and second pulse adjustment devices*), providing a first strategy and a second strategy for the same model of the optical disk (Column 7, lines 41-48, *i.e.*, a *write-once-read-many type disc*), the same recording rate and the same linear velocity, the first strategy being designed to shorten the pulse width of the laser drive signal and increase the power of the laser beam as compared to the second strategy (Column 5,

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lines 21-26 *corresponding to the first write strategy*), the second strategy being designed to lengthen the pulse width of the laser drive signal and decrease the power of the laser beam as compared to the first strategy (Column 6, lines 4-8 *corresponding to the second write strategy*) and using changeably both of the first strategy and the second strategy dependently on conditions of the recording of information (Column 1, line 66-Column 2, line 15).

Regarding claim 9, Taniguchi discloses wherein the step of providing provides both versions of the first strategy and the second strategy for an optical disk having a recording capacity measured in terms of a total recording time which is longer than a predetermined time, and providing only one version of the strategy equivalent to the first strategy for another optical disk having a recording capacity measured in terms of a total recording time which is not longer than the predetermined recording time (Column 5, lines 58-64. *More specifically, the write-once-read-many type disc is a variable record length disc based on recording frequency. Furthermore, a "predetermined time" can be any time since the "predetermined time" is not further defined in reference to any other time*).

Regarding claim 10, Taniguchi discloses wherein the step of providing provides both versions of the first strategy and the second strategy for a recording rate smaller than a specified value, and providing only one version of the strategy equivalent to the first strategy for another recording rate greater than the specified value (Column 5, lines 58-64. *More specifically, the write-once-read-many type disc is a variable record length disc based on recording frequency. Furthermore, a "predetermined time" can be any*

*time since the "predetermined time" is not further defined in reference to any other time).*

Regarding claim 11, Taniguchi discloses wherein the step of using changes the first strategy and the second strategy in accordance with a changeover operation of recording modes by a user, the recording modes representing the conditions of the recording of information (Column 1, line 46-Column 2, line 15. More specifically, changes from first to second writing strategies are made to obtain optimum recording duties and optimum pit formation).

Regarding claims 13, Taniguchi discloses wherein the recording modes include a normal recording mode directed to recording of information representing computer data and an alternative recording mode directed to recording of information representing audio data, and wherein the step of using uses the first strategy for the normal recording mode and uses the second strategy for the alternative recording mode (Figures 1 and 2 and Column 4, lines 49-54. *More specifically, recording data includes an FM audio signal and an EFM digital signal, which corresponds to computer data currently presented).*

Regarding claim 14, Taniguchi discloses the step of determining whether contents of information to be recorded are computer data or audio data, so that the step of using automatically uses the first strategy when the contents of the information is determined as the computer data, and uses the second strategy when the contents of the information is determined as the audio data (Figures 1 and 2 and Column 4, lines

49-54. *More specifically, recording data includes an FM audio signal and an EFM digital signal, which corresponds to computer data currently presented).*

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniguchi and in view of Nakajo (US 5,485,449).

Regarding claim 12, Taniguchi discloses the limitations of claims 8 and 11 above, and further discloses wherein the recording mode includes a normal recording mode directing a reduction of jitters of the information recorded on the optical disk and wherein the step of using uses the first strategy for the normal recording mode (Column 5, lines 16-26, *where a jitter-free record pit is produced by decreasing the recording duty(width) and increasing the recording laser power*). Taniguchi does not explicitly disclose an alternative recording mode (corresponding to the second write strategy) directing a reduction of crosstalk of the information on the optical disk and wherein the step of using uses the second strategy for the alternative recording mode. Rather Taniguchi discloses increasing the recording duty(width) and decreasing the recording laser power in order to form an optimum pit. However, in the same field of endeavor,

Nakajo discloses that increasing the recording pit width and decreasing the recording laser power results in a reduction of crosstalk (Figures 5 and 6).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the variable pit length method of Taniguchi with the crosstalk reduction teachings of Nakajo, motivation being to provide Taniguchi with a method to correct the adverse effects of both jitter and crosstalk, which leads to errors in disc reproduction (Column 1, lines 44-51 of Nakajo).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Tsu (US PgPub 2002/01143256) discloses a method of recording memory. Nakajo (US 5,502,702) discloses an optical disc recording device using basic recording information and projection time control. Kimura et al. (US 6,192,017) disclose a method and apparatus for reducing the width of marks written in optical media. Miyamoto et al. (US 6,842,415) disclose an information recording method and apparatus with suppressed mark edge jitters.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Thomas Alunkal



WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER